

Lesson 2.6

October 29, 2013

WarmUp

Find the quotient.

5. $56 \div 8 =$ _____

6. $99 \div 11 =$ _____

7. $132 \div 6 =$ _____

9. $\frac{88}{4} =$ _____

10. $\frac{156}{3} =$ _____

11. $\frac{430}{86} =$ _____

13. $18 \overline{)216}$

14. $12 \overline{)960}$

15. $9 \overline{)567}$

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Essential Question

How can you use base-ten blocks to model decimal division?

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LessonTarget

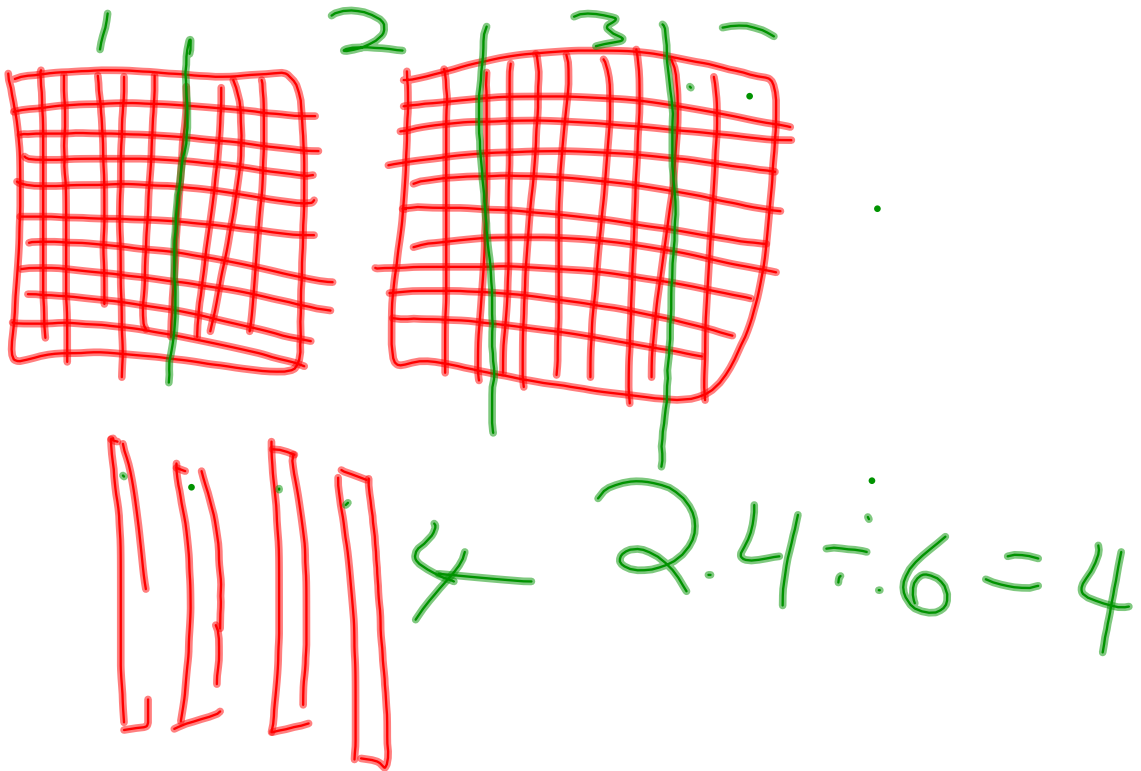
To be able to:

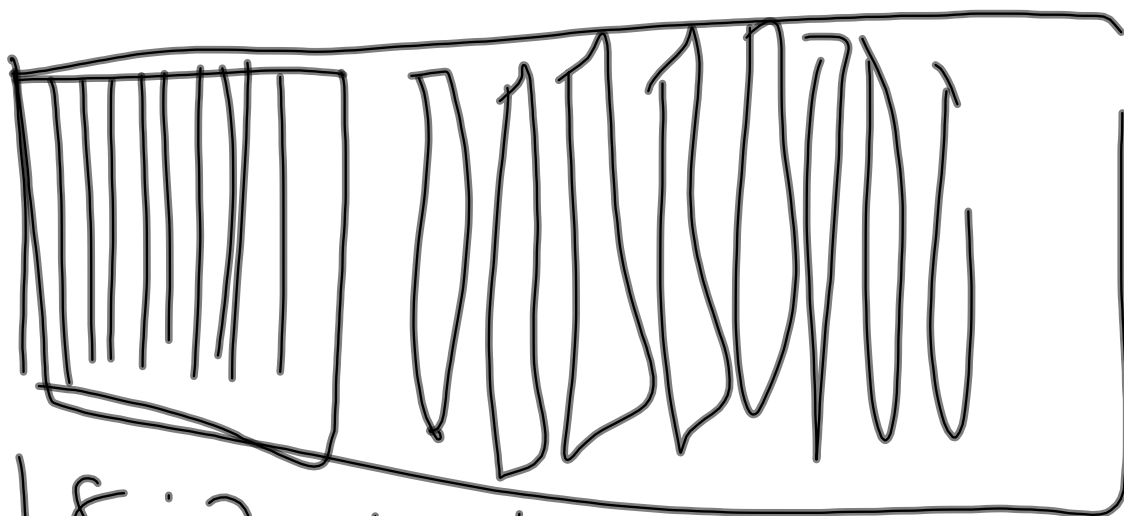
- use base-ten blocks and a formal rule to divide decimals.

Self-Evaluation Rubric

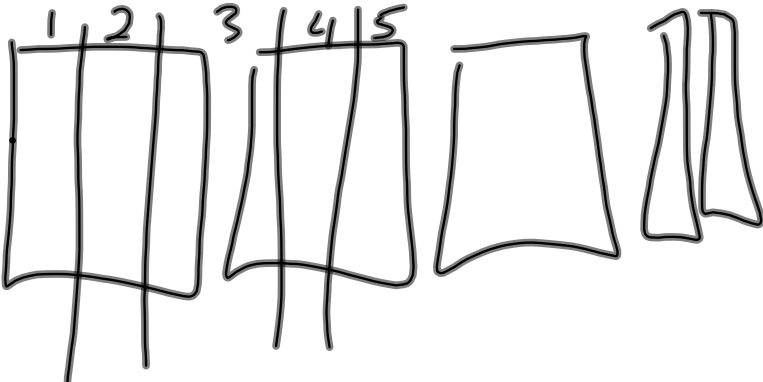
Score	Description
4	I can teach other students how to use base-ten blocks and a formal rule to divide decimals
3	I can use base-ten blocks and a formal rule to divide decimals
2	I recognize how to use base-ten blocks and a formal rule to divide decimals.
1	I do not know how to use base-ten blocks and a formal rule to divide decimals.

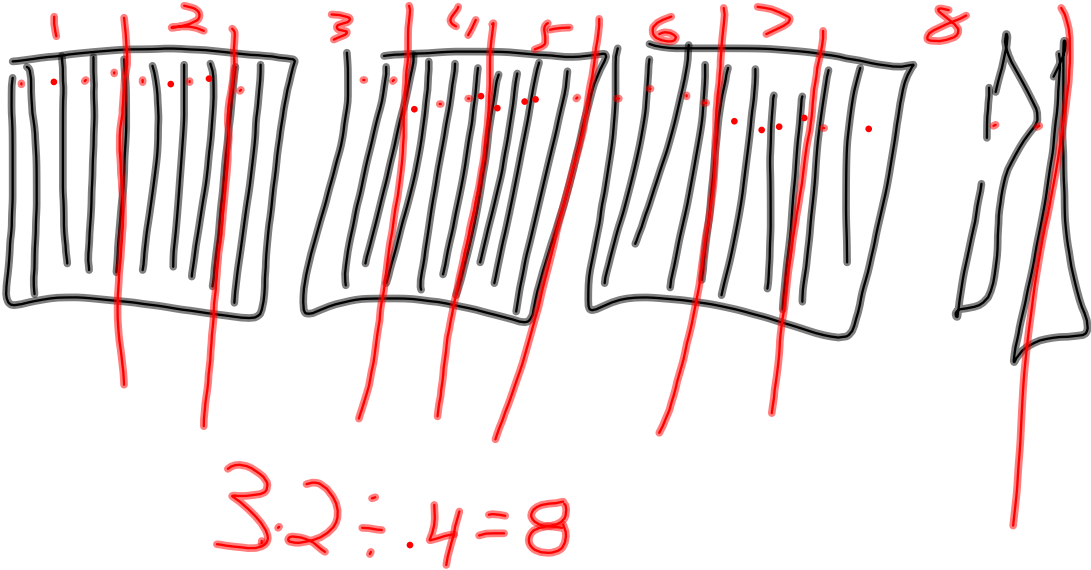
Base-TenBlocks






$$1.8 \div 2 = 1.8 \cdot \frac{1}{2} = .9$$





$$2.4 \div .6 = 4$$

$$3.2 \div .4 = 8$$

$$\begin{array}{r} \overline{10} \\ 1 \overline{) 10} \\ \underline{10} \\ 10 \overline{) 100} \\ \underline{100} \\ 100 \overline{) 1000} \\ \underline{1000} \\ 1000 \overline{) 10000} \\ \underline{10000} \end{array}$$


$$\overline{6) 2.4}$$

$$\begin{array}{r} \overline{4} \\ 6 \overline{) 24} \\ \underline{24} \end{array}$$

$$\begin{array}{r} \overline{4) 32} \\ \underline{8} \\ 4 \overline{) 32} \\ \underline{32} \end{array}$$

$$2 \overline{) 1.8}$$

Activities 1&2

With a partner, complete
Activity 1 & 2 on pages 51 - 53
in your Big Ideas Record and
Pracce Journal.

Key Idea

Dividing Decimals by Whole Numbers

Words Place the decimal point in the quotient above the decimal point in the dividend. Then divide as you would with whole numbers. Continue until there is no remainder.

Numbers

$$\begin{array}{r} 1.83 \\ 4 \overline{) 7.32} \end{array}$$

Place the decimal point in the quotient above the decimal point in the dividend.

1 Dividing Decimals by Whole Numbers

a. Find $7.6 \div 4$.

Estimate $8 \div 4 = 2$

$$\begin{array}{r}
 1.9 \\
 4 \overline{)7.6} \\
 \underline{-4} \quad \checkmark \\
 36 \\
 \underline{-36} \\
 0
 \end{array}$$

Place the decimal point in the quotient above the decimal point in the dividend.

∴ So, $7.6 \div 4 = 1.9$.

Reasonable? $1.9 \approx 2$ ✓

$$\begin{array}{r} 0.9 \\ 2 \overline{) 1.8} \\ \underline{18} \end{array}$$

$$9 - 8 = 1$$
$$8 - 9 = -1$$

$$\begin{array}{r} .9 \\ 2 \overline{) 18.0} \end{array}$$

$$2.4$$

$$24 \div 6 = 4$$

$$6 \div 24 = \frac{1}{4}$$

$$\begin{array}{r} 0.25 \\ 24 \overline{) 600} \\ \underline{48} \\ 120 \end{array}$$

$.25 = \frac{1}{4}$

$$4 = 24 \div 6 = 2.4 \div .6$$

$$240 \div 60 = 4 \quad .24 \div .06$$

4

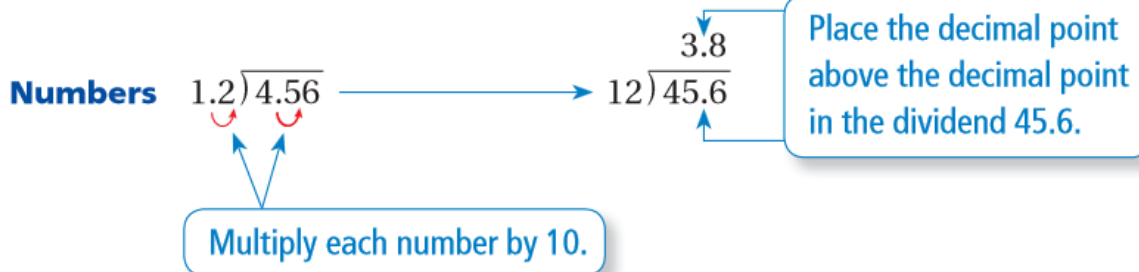
TryIt!

Try numbers 4 - 6 on page 94 of
your Big Ideas Text Book.

Key Idea

Dividing Decimals by Decimals

Words Multiply the divisor *and* the dividend by a power of 10 to make the divisor a whole number. Then place the decimal point in the quotient and divide as you would with whole numbers. Continue until there is no remainder.



$$10^1 = 10 \quad 1$$

$$10^2 = 100 \quad 2$$

$$10^3 = 1000 \quad 3$$

2 Dividing Decimals

a. Find $18.2 \div 1.4$.

$$\begin{array}{r}
 1.4 \overline{)18.2} \\
 \hline
 14 \overline{)182.} \\
 \underline{-14} \\
 42 \\
 \underline{-42} \\
 0
 \end{array}$$

Place the decimal point above the decimal point in the dividend 182.

Multiply each number by 10.

So, $18.2 \div 1.4 = 13$.

Check $13 \times 1.4 = 18.2$ ✓

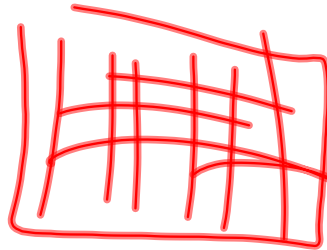
$$140 \overline{) 182}$$



$$4 \div 2 = 2$$

$$40 \div 20 = 2$$

$$400 \div 200 = 2$$



TryIt!

Try numbers 9 & 10 on page 95
of your Big Ideas Text Book.

3 Inserting Zeros in the Dividend and the Quotient

Divide $2.45 \div 0.007$.

$0.007 \overline{)2.450}$

Multiply each number by 1000.
 Insert a zero in the dividend.

$7 \overline{)2450}$
 $\underline{-21}$
 35
 $\underline{-35}$
 00

Because $0 \div 7 = 0$,
 insert a zero in the
 quotient.

So, $2.45 \div 0.007 = 350$.

TryIt!

Try numbers 13 & 14 on page
96 of your Big Ideas Text Book.

Assignment

Do numbers:

13, 15, 20, 27, 30, 33, 36, 43,
48, 50, 52

on pages 97 & 98 of your Big
Ideas Text Book.

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Essential Question

How can you use base-ten blocks to model decimal division?

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LessonTarget

To be able to:

- use base-ten blocks and a formal rule to divide decimals.

Self-Evaluation Rubric

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Homework

Big Ideas Record and
Pracce Journal

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